

## Section 1. Registration Information

### Source Identification

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Facility Name:	Lake Pleasant Water Treatment Plant
Parent Company #1 Name:	City of Phoenix
Parent Company #2 Name:	

### Submission and Acceptance

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Submission Type:	Re-submission
Subsequent RMP Submission Reason:	5-year update (40 CFR 68.190(b)(1))
Description:	
Receipt Date:	26-Jul-2011
Postmark Date:	26-Jul-2011
Next Due Date:	26-Jul-2016
Completeness Check Date:	26-Jul-2011
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

### Facility Identification

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EPA Facility Identifier:	1000 0019 6067
Other EPA Systems Facility ID:	AZR000503102

### Dun and Bradstreet Numbers (DUNS)

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Facility DUNS:	78984358
Parent Company #1 DUNS:	
Parent Company #2 DUNS:	

### Facility Location Address

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Street 1:	37000 North New River Road
Street 2:	
City:	Peoria
State:	ARIZONA
ZIP:	85383
ZIP4:	
County:	MARICOPA

### Facility Latitude and Longitude

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Latitude (decimal):	33.821004
Longitude (decimal):	-112.230043
Lat/Long Method:	Interpolation - Digital map source (TIGER)
Lat/Long Description:	Center of Facility
Horizontal Accuracy Measure:	25
Horizontal Reference Datum Name:	World Geodetic System of 1984
Source Map Scale Number:	

## Owner or Operator

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Operator Name:	City of Phoenix
Operator Phone:	(602) 534-7589

## Mailing Address

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Operator Street 1:	2474 South 22nd Avenue
Operator Street 2:	Bldg 31
Operator City:	Phoenix
Operator State:	ARIZONA
Operator ZIP:	85009
Operator ZIP4:	
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

## Name and title of person or position responsible for Part 68 (RMP) Implementation

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RMP Name of Person:	Paul Mally
RMP Title of Person or Position:	Facility Manager
RMP E-mail Address:	paul.mally@amwater.com

## Emergency Contact

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Emergency Contact Name:	Paul Mally
Emergency Contact Title:	Facility Manager
Emergency Contact Phone:	(602) 537-3273
Emergency Contact 24-Hour Phone:	(602) 537-3273
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	paul.mally@amwater.com

## Other Points of Contact

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Facility or Parent Company E-mail Address:	glenda.hyde@phoenix.gov
Facility Public Contact Phone:	
Facility or Parent Company WWW Homepage Address:	http://phoenix.gov

## Local Emergency Planning Committee

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LEPC:	Maricopa County LEPC
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## Full Time Equivalent Employees

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Number of Full Time Employees (FTE) on Site:	15
FTE Claimed as CBI:	

## Covered By

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OSHA PSM :	Yes
EPCRA 302 :	Yes
CAA Title V:	
Air Operating Permit ID:	

## OSHA Ranking

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OSHA Star or Merit Ranking:

## Last Safety Inspection

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Last Safety Inspection (By an External Agency) Date:	12-May-2011
Last Safety Inspection Performed By an External Agency:	Fire Department

## Predictive Filing

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Did this RMP involve predictive filing?:

## Preparer Information

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Preparer Name:  
Preparer Phone:  
Preparer Street 1:  
Preparer Street 2:  
Preparer City:  
Preparer State:  
Preparer ZIP:  
Preparer ZIP4:  
Preparer Foreign State:  
Preparer Foreign Country:  
Preparer Foreign ZIP:

## Confidential Business Information (CBI)

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CBI Claimed:  
Substantiation Provided:  
Unsanitized RMP Provided:

## Reportable Accidents

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Reportable Accidents:	See Section 6. Accident History below to determine if there were any accidents reported for this RMP.
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## Process Chemicals

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Process ID:	1000028368
Description:	
Process Chemical ID:	1000033932
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	52000
CBI Claimed:	
Flammable/Toxic:	Toxic

## Process NAICS

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Process ID:	1000028368
Process NAICS ID:	1000028671
Program Level:	Program Level 3 process
NAICS Code:	22131
NAICS Description:	Water Supply and Irrigation Systems

## Section 2. Toxics: Worst Case

Toxic Worst ID: 1000023539

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Percent Weight:	99.5
Physical State:	Gas liquified by pressure
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	D
Topography:	Urban

### Passive Mitigation Considered

Dikes:	
Enclosures:	Yes
Berms:	
Drains:	
Sumps:	
Other Type:	

## Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000025288

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Percent Weight:	99.5
Physical State:	Gas
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

### Passive Mitigation Considered

Dikes:  
Enclosures:  
Berms:  
Drains:  
Sumps:  
Other Type:

### Active Mitigation Considered

Sprinkler System:	Yes
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	Yes
Emergency Shutdown:	Yes
Other Type:	

## **Section 4. Flammables: Worst Case**

No records found.

## **Section 5. Flammables: Alternative Release**

No records found.



## Section 6. Accident History

No records found.

## Section 7. Program Level 3

### Description

The City takes an active role in preventing accidental releases by ensuring that its employees are properly trained in the safe operation of covered processes and the safe handling of treatment chemicals. The City has also established and maintains procedures for emergency notification and response. These are reviewed with employees on an periodic basis and revised to accommodate changes in staffing when they occur. To increase employee safety and awareness, the City: maintains up-to-date safety information and operating procedures, performs regular preventative maintenance, provides periodic refresher training on safe handling of chemicals, and conducts quarterly safety drills.

### Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000029103
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5

Prevention Program Level 3 ID:	1000024479
NAICS Code:	22131

### Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	20-Apr-2011
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### Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	23-Jun-2011
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### The Technique Used

What If:	Yes
Checklist:	
What If/Checklist:	
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	23-Jun-2011

### Major Hazards Identified

Toxic Release:	Yes
Fire:	
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	
Corrosion:	Yes

Overfilling:  
Contamination:  
Equipment Failure: Yes  
Loss of Cooling, Heating, Electricity, Instrument Air:  
Earthquake:  
Floods (Flood Plain):  
Tornado:  
Hurricanes:  
Other Major Hazard Identified:

## Process Controls in Use

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Vents:  
Relief Valves: Yes  
Check Valves: Yes  
Scrubbers: Yes  
Flares:  
Manual Shutoffs: Yes  
Automatic Shutoffs: Yes  
Interlocks: Yes  
Alarms and Procedures: Yes  
Keyed Bypass:  
Emergency Air Supply:  
Emergency Power: Yes  
Backup Pump:  
Grounding Equipment:  
Inhibitor Addition:  
Rupture Disks: Yes  
Excess Flow Device:  
Quench System:  
Purge System:  
None:  
Other Process Control in Use:

## Mitigation Systems in Use

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Sprinkler System: Yes  
Dikes:  
Fire Walls: Yes  
Blast Walls:  
Deluge System:  
Water Curtain:  
Enclosure: Yes  
Neutralization:  
None:  
Other Mitigation System in Use:

## Monitoring/Detection Systems in Use

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Process Area Detectors: Yes  
Perimeter Monitors:  
None:  
Other Monitoring/Detection System in Use:

## Changes Since Last PHA Update

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Reduction in Chemical Inventory:  
Increase in Chemical Inventory:  
Change Process Parameters:  
Installation of Process Controls:  
Installation of Process Detection Systems:  
Installation of Perimeter Monitoring Systems: Yes  
Installation of Mitigation Systems:  
None Recommended:  
None:  
Other Changes Since Last PHA or PHA Update:

## Review of Operating Procedures

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Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures): 20-Apr-2011

## Training

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Training Revision Date (The date of the most recent review or revision of training programs): 20-Apr-2011

## The Type of Training Provided

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Classroom: Yes  
On the Job: Yes  
Other Training:

## The Type of Competency Testing Used

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Written Tests:  
Oral Tests: Yes  
Demonstration: Yes  
Observation: Yes  
Other Type of Competency Testing Used:

## Maintenance

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Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures): 21-Jun-2011

Equipment Inspection Date (The date of the most recent equipment inspection or test): 23-Jun-2011

Equipment Tested (Equipment most recently inspected or tested): all equipment to be tested and inspected monthly per plant PM

## Management of Change

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Change Management Date (The date of the most recent change that triggered management of change procedures):

Change Management Revision Date (The date of the most recent review or revision of management of change procedures): 11-Jun-2011

## Pre-Startup Review

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Pre-Startup Review Date (The date of the most recent pre-startup review): 29-May-2011

## Compliance Audits

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Compliance Audit Date (The date of the most recent compliance audit): 10-May-2011

Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit): 01-Aug-2011

## Incident Investigation

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Incident Investigation Date (The date of the most recent incident investigation (if any)):

Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):

## Employee Participation Plans

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Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans): 20-Apr-2011

## Hot Work Permit Procedures

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Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures): 20-Apr-2011

## Contractor Safety Procedures

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Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures): 12-Jun-2011

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance): 12-Jun-2011

## Confidential Business Information

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CBI Claimed:

## **Section 8. Program Level 2**

## Section 9. Emergency Response

### Written Emergency Response (ER) Plan

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Community Plan (Is facility included in written community emergency response plan?):

Facility Plan (Does facility have its own written emergency response plan?): Yes

Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?): Yes

Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?): Yes

Healthcare (Does facility's ER plan include information on emergency health care?): Yes

### Emergency Response Review

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Review Date (Date of most recent review or update of facility's ER plan): 20-Apr-2011

### Emergency Response Training

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Training Date (Date of most recent review or update of facility's employees): 20-Apr-2011

### Local Agency

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Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated): City of Phoenix Fire Department

Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated): (602) 262-6595

### Subject to

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OSHA Regulations at 29 CFR 1910.38: Yes

OSHA Regulations at 29 CFR 1910.120:

Clean Water Regulations at 40 CFR 112:

RCRA Regulations at CFR 264, 265, and 279.52: Yes

OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:

State EPCRA Rules or Laws: Yes

Other (Specify):

## Executive Summary

The Process Safety Management (PSM) standard and the Risk Management Program (RMP) rule are targeted at highly hazardous chemicals that have the potential to cause a catastrophic incident. The Environmental Protection Agency (EPA) rule are required by the Clean Air Act Amendments and are outline in Federal Regulation 40 CFR Part 68, and DOL Occupational Safety & Health Administration (OSHA) guideline 1910.119 Appendix C. This PSM/RMP is intended to aid American Water Services (AWS) in our efforts to prevent or mitigate episodic chemical releases that could lead to catastrophe in the workplace and possibly to the surrounding community. This Program will ensure full compliance with Regulations 40 CFR Part 68 and 1910.119 Appendix C. and should serve to enhance AWS relationship with our neighbors in Peoria and New River.

The major objective of the PSM/RMP for highly hazardous chemicals is to prevent unwanted releases of hazardous chemicals especially into locations that could expose employees and others to serious hazards. An effective PSM/RMP plan requires a systematic approach to evaluating the whole process. Using this approach-the process design, process technology, operational and maintenance activities and procedures, no-routine activities and procedures, emergency preparedness plans and procedures, training programs, and other elements that impact the unit processes-were all considered in our evaluation. The various lines of defense that were incorporated into Black & Veatch/McCarthy design and AWS operation of the new Lake Pleasant Treatment Facility to prevent or mitigate the release of hazardous chemicals were reevaluated and enhanced to assure their effectiveness.

Chemicals stored at the Lake Pleasant Treatment Facility that are targeted by the PSM and/or the RMP are chlorine and ozone.

Chlorine-stored in quantities above the 40 CFR Part 68 threshold limit of 2500 pounds.

Ozone-no regulation limit.

Therefore, chlorine is the chemical addressed in this Process Safety Management Plan & Risk Management Plan, as required by the EPA Risk Management Plan Regulation CFR40 Part 68 and DOL OSHA 1910.119 Appendix C guideline.

The new Lake Pleasant Water Treatment Facility is located in the northwest part of Phoenix, AZ. The Lake Pleasant Water Treatment Facility will store up to 26 tons of chlorine gas in one-ton containers. Containers will be stored in an enclosed building with a chlorine scrubber and gas containment provided by the building. The facility is equipped with gas detectors that will activate the scrubber system in the event of a chlorine release. The facility will be staffed 24 hours a day by one licensed Water Treatment Operator. During normal business hours there may be other employees, contractors, and/or consultants engaged in work at the facility. The chlorine storage area at the facility will be a secured zone and all access doors will be locked at all times unless authorized personnel are present.

AWS is committed to protecting employees, the public, and the environment from the release of chlorine gas.

The worst-case release scenario, as specified by EPA , involved the release of the entire contents of a on-ton container in a ten-minute period with no passive mitigation. The alternative-case release scenario involved the potential rupture of a 5/16" valve or transfer line. This scenario estimated the impacts of the release of approximately 610 pounds of chlorine over a 60-minute period. Both scenarios were modeled using the latest version of RMP\*COMP. The distance to the endpoint for the worst-case release was found to be 1.3 miles. The distance to the endpoint for the alternate-case release scenario was found to be 0.10 miles.

AWS personnel will not be responding to Chlorine emergencies at the Lake Pleasant Treatment Facility. Instead, we have made arrangement per RPM and PSM regulations to have the local emergency response provider, respond in the even of a Chlorine Emergency.

There have been no reportable releases within the last five years as this is a new facility. AWS has had chlorine safety programs in place for many years at other facilities. AWS will maintain open releastions and communications with City of Phoenix Water Services Department (WSD) and local fire departments responsible for serving the Lake Pleasant Facility. ASW will conduct ongoing training for the Water Treatment Operators in all aspects of facility operation, including chlorine system operations and maintenance.